

Warm-up

1) Identify the relationship between the two given angles:

Supplementary

2) This means the angles are:

$$\text{Sum} = 180$$

$$m\angle e + m\angle d = 180$$

3) Set up the equation:

$$8x + 1 + 5x + 10 = 180$$

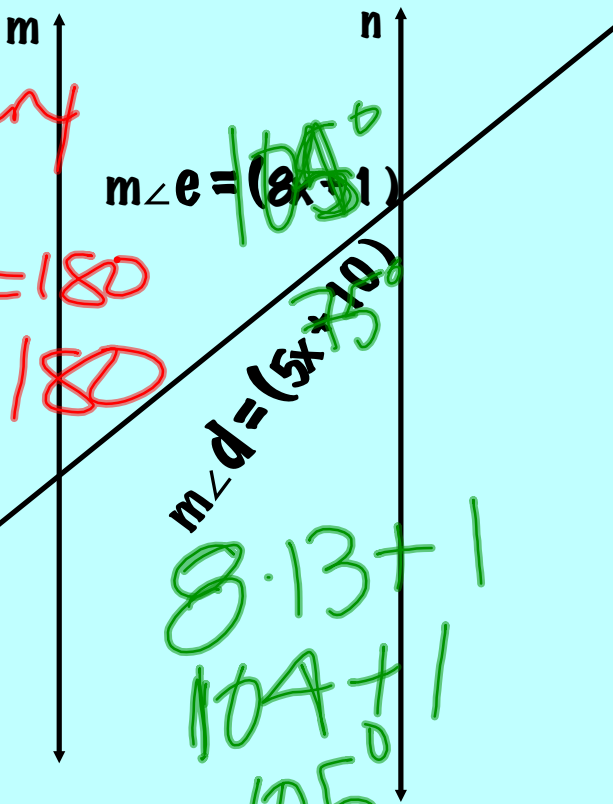
4) Find the value of x and $m\angle d$ and $m\angle e$.

$$\begin{aligned} m\angle d &= 5x + 10 \\ &= 5 \cdot 13 + 10 \\ &= 65 + 10 \\ &= 75^\circ \end{aligned}$$

$$m\angle e = (8x + 1)$$

$$m\angle d = (5x + 10)$$

$$\begin{aligned} 8 \cdot 13 + 1 \\ 104 + 1 \\ 105^\circ \end{aligned}$$

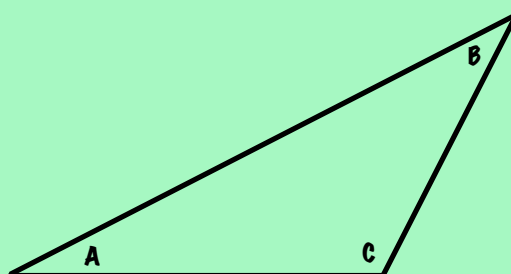


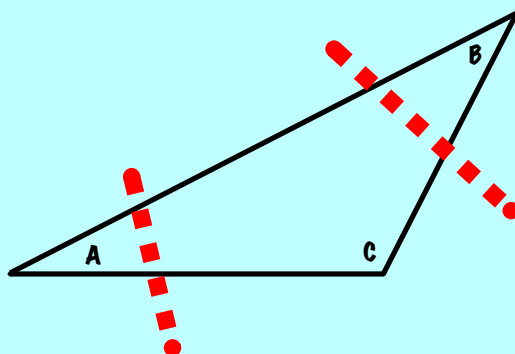
MAKE A TRIANGLE

Using a ruler make a triangle with sides at least 5 inches long

Label the angles on the inside **A**, **B**, and **C**.

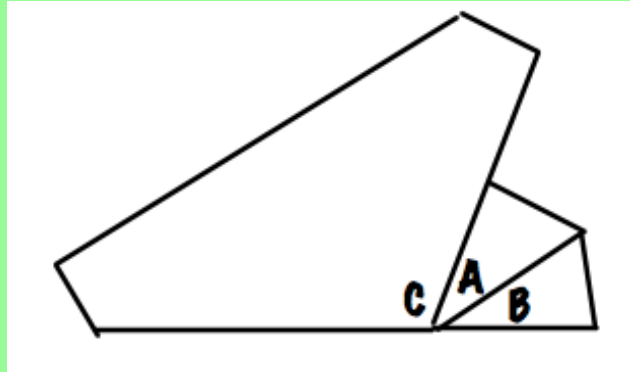
Cut the triangle out





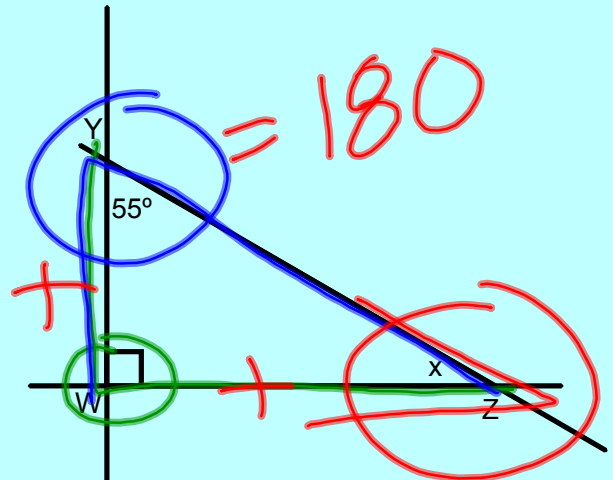
Tear off angles A & B at least two inches from the corner.

Arrange the angles so they share a vertex....



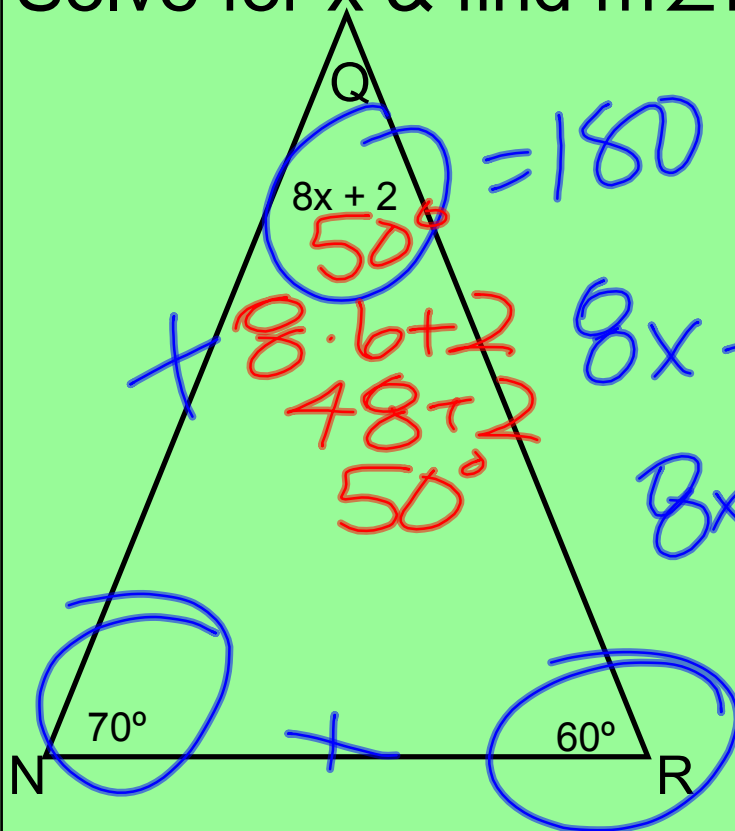
What do the 3 angles form???

The sum of the interior angles in a triangle is 180° .

$$m \angle CAB$$
 $m\angle YZW$

25°

Solve for x & find $m\angle NQR$



$$= 180$$

$$8x + 2 + 70 + 60 = 180$$

$$8x + 132 = 180$$

$$-132$$

$$8x = 48$$

$$\cancel{8} = 6$$

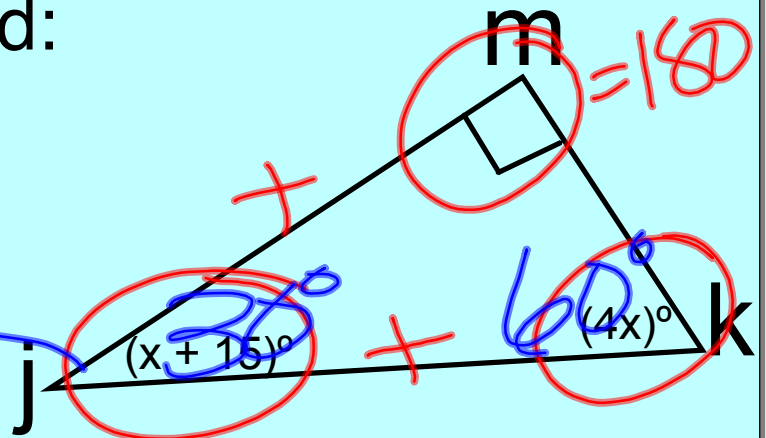
Solve for x and find:

$m\angle jkm$

$m\angle kmj$

$m\angle kjm$

x =



$$(x + 15) + (4x) + 90 = 180$$

$$5x + 105 = 180$$

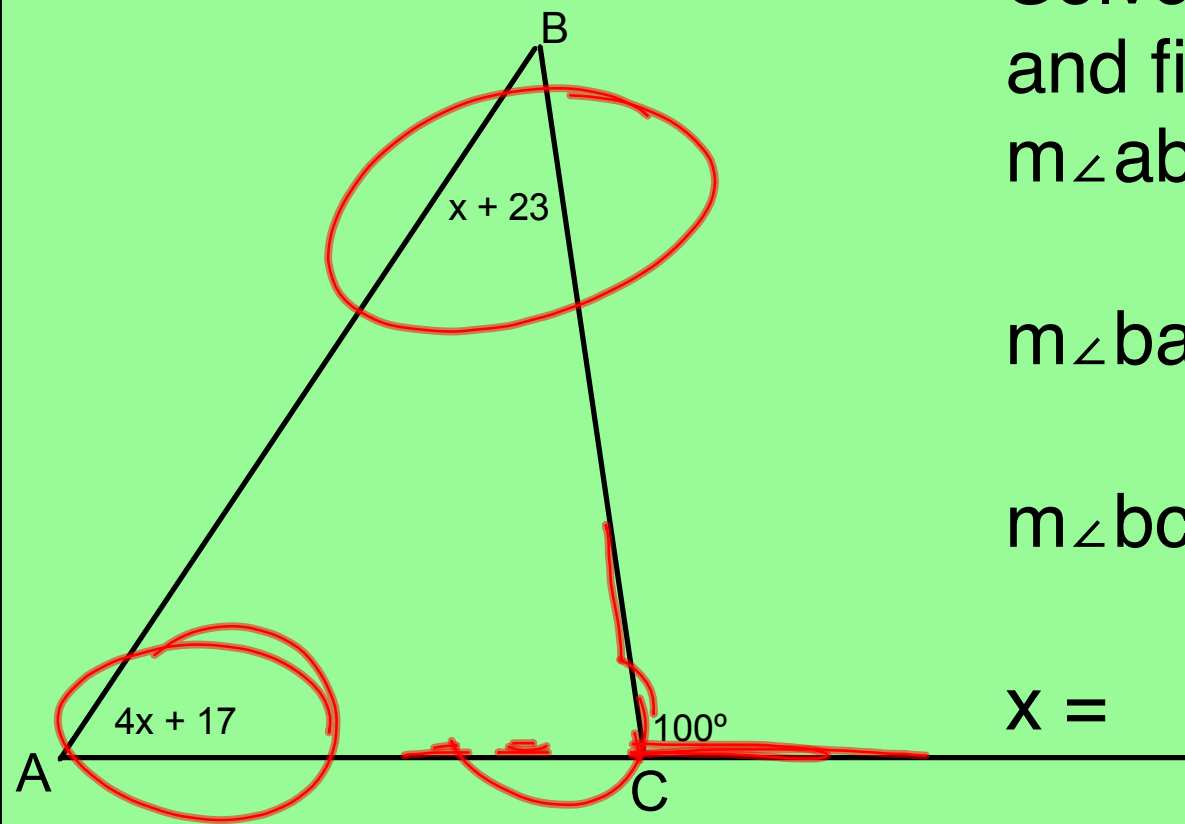
$$-105$$

$$5x = 75$$

$$x = 15$$

$$\begin{array}{r} x + 15 \\ 15 + 15 \\ \hline 30^\circ \end{array}$$

$$\begin{array}{r} 4x \\ 4 \cdot 15 \\ \hline 60^\circ \end{array}$$



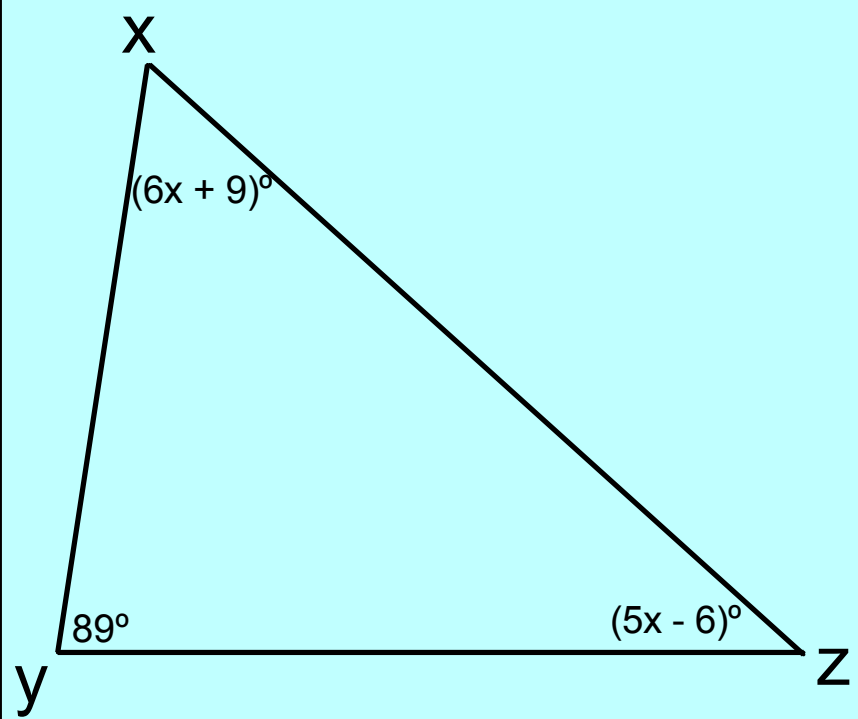
Solve for x
and find:

$m\angle abc$

$m\angle bac$

$m\angle bca$

$x =$



A triangle with vertices X, Y, and Z. The interior angle at vertex X is labeled $(6x + 9)^\circ$. The interior angle at vertex Y is labeled 89° . The interior angle at vertex Z is labeled $(5x - 6)^\circ$.

Solve for x
and find:

$m\angle xyz$

$m\angle zxy$

$m\angle yzx$

$x =$

Homework Time!